DOCUMENT RESUME

ED 265 176 TM 860 014

TITLE	Research by External Agencies or Individuals in AISD.
INSTITUTION	Austin Independent School District, Tex. Office of Research and Evaluation.
REPORT NO	AISD-ORE-85-52
PUB DATE	[85]
NOTE	55p.; For related documents, see ED 236 170 and ED 252 568. Cover title: "External Research in AISD: Aiming for Growth."
PUB TYPE	Reference Materials - Bibliographies (131) -- Reports - Research/Technical (143)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	Educational Research; Elementary Secondary Education; *Program Evaluation; Research and Development; *Research Projects; Research Proposals; *School Districts
IDENTIFIERS	*Austin Independent School District TX

ABSTRACT

This document is the seventh annual publication of abstracts of research projects conducted within the Austin (Texas) Independent School District (AISD) by external agencies or individuals. Each researcher has passed a screening process in which AISD staff members from a variety of departments reviewed proposals. This screening insures the following: (1) time and energies of AISD staff and students are protected; (2) only projects meeting District criteria as conditions for participation in research are approved; and (3) high quality research that fits the needs and interests of the District is promoted. Each researcher is required to provide an abstract for this volume, and each abstract is entirely the work of the author named. Of twenty-two proposals submitted between June 15, 1984 and June 15, 1985, sixteen were approved. A table of research projects lists project number, title of research project, project director sponsor, schools where research is being conducted, and whether or not a report is on file. Abstracts (or interim reports for projects in operation) include participating schools, description of the study, results, implications of results, and implications for AISD. (LMO)

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REPORT

Title: Research by External Agencies or Individuals in AISD

Contact Person: Glynn Ligon

For the seventh year, we are publishing the abstracts of research projects conducted within the Austin Independent School District by external agencies or individuals. Each of these researchers has had to go through a screening process in which AISD staff members from a variety of departments reviewed their proposals. This is to ensure that:

- The time and energies of AISD staff and students are protected.
- Only those projects meeting the criteria established by the District as conditions for participation in research are approved.
- High-quality research that fits the needs and interests of the District is promoted.

The Office of Research and Evaluation is the official point of first contact for all proposals to conduct research in the District. Many of these initial contacts are by phone or personal visit. Discussions at that time often result in the immediate determination that proposals are not viable. For those projects which do appear to be feasible, the researcher is provided forms and instructions for a formal proposal. When the formal proposal is received, a three-(or more) member administrative review committee is appointed. The Office of Research and Evaluation makes a final decision on administrative approval or disapproval of the project based on the recommendations of the committee members. If approval is given, the Director works with the project director and appropriate AISD staff to select suitable schools and/or departments for the study. However, the principals on the selected campuses may decide that the research project would interfere with instructional efforts and disallow the project.

The researcher is required to provide an abstract for this volume as well as two copies of any dissertation, publication, or other report issuing from the study. These are kept on file at the Office of Research and Evaluation. The abstracts included in this publication are entirely the work of the authors named without the review or endorsement of the Office of Research and Evaluation.

A total of 22 proposals was reviewed between June 15, 1984, and June 15, 1985. Of these, 16 were approved (including two to be conducted during the next school year), and 6 were disapproved.

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ROSTER OF RESEARCH PROJECTS BY EXTERNAL RESEARCHERS

Project Number	Title of Research Project	Project Director Sponsor	Schools Where Being Conducted	Full Report on File
959.19	The Relationship Between Achievement Test Response Changes, Ethnicity, and Family Income Level	M. Kevin Matter Sponsor: Dr. Edmund Emmer, U.T.	Office of Research and Evaluation	Yes
960.07	The Ontogeny of Conceptual Tempo and Object Relations: A Cybernetic Analysis of Response-produced Feedback in Family Interaction	Mark J. Wernick Sponsor: Dr. Frank Wicker, U.T.	Anderson, Austin, Johnston, LBJ, and Lanier High Schools, Burnet, Dobie, Fulmore, and Lamar Junior High Schools	Yes
R83.03	The Impact of Basal Reader Characteristics on the Development of Reading Skill - a Longitudinal Study	Connie Juel Philip Gough Sponsor: University of Texas Faculty	Houston Elementary School	No
R83.06	The Development of Metalinguistic Abilities in Children	Kerry J. Washburn David T. Hakes Sponsor: University of Texas Faculty	Bryker Woods, Casis, Cunningham, Doss, Govalle, Gullett, Highland Park, Hill, Pillow, and Summitt Elementary Schools	Yes
R83.15	Children's Use of Conjunctions When Writing for Different Audiences and Purposes	Patricia O'Neal Willis Sponsor: Diane L. Schallert, U.T.	Cunningham Elementary School	No
R83.22	Analyses of Austin Longitudinal Student Data File	Peter H. Rossi Sponsor: University of Massachusetts Faculty	Office of Research and Evaluation	No

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Project Number	Title of Research Project	Project Director Sponsor	Schools Where Being Conducted	Full Report on File
R84.03	Biological Investigations in High School Classrooms: A Cooperative Effort of Teachers, Students, and Scientists	Kathleen A. O'Sullivan Sponsor: Dr. Earl J. Montague, U.T.	Anderson, Crockett, and Travis High Schools	No
R84.04	The Effect of Parent-Teacher Communication and Problem Solving on the Educational Development of Underachieving Elementary Children	Craig A. Porterfield Sponsor: Martin Tombari, U.T.	Blackshear, Harris, Langford, and Ridgetop Elementary Schools	No
R84.14	Organizational Factors Associated with Student Attitude and Alienation in Alternative Schools	Jimmie L. Todd Sponsor: Dr. Mike Thomas, U.T.	W. R. Robbins Secondary School	No
R84.16	An Observational Study of Young Children Using Microcomputers	Celia Genishi Sponsor: University of Texas Faculty	Highland Park Elementary School	No
R84.19	The Effect of Brief, Structured Writing Practice on Children's Written Composition	Patricia O'Neal Willis Sponsor: Diane L. Schallert, U.T.	Becker, Brooke, and Cook Elementary Schools	No
R84.21	Evaluating Students' Coping Style	James E. Gilliam Sponsor: University of Texas Faculty	Webb Elementary School	No

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Project Number	Title of Research Project	Project Director Sponsor	Schools Where Being Conducted	Full Report on File
R84.22	Knowledge of Forms and Functions of Print in Preschool-Aged Children	Nancy Roser James Hoffman Sponsor: University of Texas Faculty	Allan, Brentwood, Brown, Casis, Dawson, Govalle, Harris, Joslin, Oak Springs, Odom, Pecan Springs, Pillow, Rosewood, Summitt, and Zilker Elementary Schools	No
R84.25	Characteristics of Limited Proficient Students in LD, MR, and SH Programs	Alba A. Ortiz Sponsor: University of Texas Faculty	Central Office of Elementary Special Education	No
R84.27	Relationship Between Multiple Risk Factors and Child Outcome for Children of Adolescent Mothers	Anne Martin Sponsor: Dr. Keith Turner, U.T.	Travis and Johnston High Schools and the Teenage Parent Program housed at Allan Elementary School	No
R84.29	Managing Academic Tasks in High Schools	Walter Doyle Sponsor: University of Texas Faculty	Anderson, Crockett, and LBJ High Schools	No
R85.01	Student's Strategies for Using Teacher Feedback	Ellen D. Gagne Sponsor: University of Texas Faculty	Crockett High School	Yes
R85.02	Neuropsychological Deficits and Spelling Performance of Dysphonetic Learning Disabled Children	Cheryl Hiltebeitel Sponsor: Dr. Cindy Carlson	Cunningham, Langford, Oak Hill, Odom, Walnut Creek, Williams, and Winn Elementary Schools	No

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Project Number	Title of Research Project	Project Director Sponsor	Schools Where Being Conducted	Full Report on File
R85.03	A Descriptive Study of Visual Behaviors of Children with Down Syndrome	Marie Welsch Sponsor: Dr. Keith Turner, U.T.	Wooten and St. Elmo Elementary Schools, Casis and St. John's Early Childhood Programs	No
R85.04	Career Interest Survey	Robert M. Kelly Sponsor: Boy Scouts of America	Anderson, Austin, Crockett, Johnson, Johnston, Lanier, Reagan, McCallum, Travis, and Robbins Secondary Schools	Yes
R85.06	Development of Written Composition Items for Use in the 1986 Texas Assessment of Basic Skills Tests	Thomas E. Anderson Sponsor: Texas Education Agency	Becker and Maplewood Elementary Schools, Fulmore and Porter Junior High Schools, and LBJ High School	No
R85.07	An Observational Study of the Teacher as Model of the Comprehension Process	Nancy Roser Sponsor: University of Texas Faculty	Casis Elementary School	No
R85.08	U.S. - Mexico Family Project	Manuel Ramirez, III Maurice Korman Sponsor: University of Texas Faculty	Fulmore, Pearce, and Martin Junior High Schools	No
R85.09	A Micro-Ethnographic Study of a Bilingual Kindergarten in Which Literature and Puppet Play Are Used as a Method of Enhancing Language Development	Pat Seawell Sponsor: Dr. George Blanco, U.T.	Sanchez Elementary School	Yes

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Project Number	Title of Research Project	Project Director Sponsor	Schools Where Being Conducted	Full Report on File
R85.10	Factors Influencing Children's Concepts of Health and Illness	Maria E. Defino Sponsor: Dr. Claire Ellen Weinstein, U.T.	Wooten Elementary	No
R85.11	Social, Environmental, and Cognitive Predictors of Social and Psychological Adjustment in Adolescents	Walter E. Jordan-Davis Sponsor: Dr. Charles J. Holahan, U.T.	Office of Research and Evaluation	No
R85.13	The Effect of Implementing a Minimum Competency Testing Program on High Level Mathematics Skills	Evangelina Mangino Sponsor: Dr. Martin Tombari, U.T.	Office of Research and Evaluation	No
R85.17	Ethical Issues Confronting Nurses Employed in Hospitals, Public Schools, and Community Health Agencies	Marie B. Andrews Sponsor: Dr. Leonard D. Ponder, A&M University	AISD Health Services	No
R85.18	Reducing Aggressive, Out of Control Behavior in Emotionally Disturbed Students in Time-out via the Use of Behavioral Photobiology	Gene Calabro Sponsor: Dr. Tom Anderson, AISD Faculty	Dill School	No
R85.19	Teaching and Learning: Personal Constructs of the Participants	Deborah Muscella Sponsor: Dr. Stephen Larsen, U.T.	Joslin Elementary School	No

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Project Number	Title of Research Project	Project Director Sponsor	Schools Where Being Conducted	Full Report on File
R85.20	A Comprehensive Investigation of Process-Outcome Relationships in Physical Education	Stephen Silverman Sponsor: University of Texas Faculty	Murchison and Burnet Junior High Schools	No
R85.22	Assessment Center Ratings: Correlation and Predictive Validity of the Total Process versus Individual Skill Dimension Ratings	Linda B. McDaniel Sponsor: Dr. James E. Yates, U.T.	AISD Personnel Department	No

The Relationship Between Achievement Test Response Changes, Ethnicity, and Family Income

Abstract

M. Kevin Matter, Ph.D.

Participating Schools: The Office of Research and Evaluation

Description of Study: Research on answer-changing behavior has consistently indicated that the majority of changed responses to objective test items result in correct answers. Answer changes on multiple-choice tests result in correct responses about 55% of the time and in incorrect responses about 19% of the time, with the selection of another incorrect response occurring about 26% of the time. Most of the research had focused on college-level students, with no studies using early elementary school students. In addition, there had been no research comparing ethnic group and family income differences with the rates and types of answer changes on objective tests. This study sought to fill those gaps in the research on answer-changing behavior.

Test booklets (grade 2) and answer sheets (grades 4, 6, and 8) were examined for types and numbers of response changes made to a standardized achievement test, the Iowa Tests of Basic Skills (ITBS). The booklets and answer sheets were randomly selected within four categories of variables: ethnic group, family income, sex, and achievement. A methodological improvement over previous studies was the elimination of possible changes due to mismarkings of the answer sheet.

Description of Results: Results indicated that the answer-changing behavior of students in grades 2, 4, 6, and 8 was very similar to subjects used in other studies. The majority of changes were from an incorrect to the correct response (56%), with few changes made from the correct to an incorrect option (17%). Only 5.9% of the students received a lower test score as a result of changing answers, with 88% receiving a higher score. Consistent with previous research, achievement level was found to be positively correlated with gain. There were significant grade level differences in the average number of item changes. Grade 2 students had the fewest number of test items but had the highest average number of answer changes. Differences in the test structure across grades (particularly between grades 2 and 4) are a plausible explanation for this finding. Some significant differences by sex were found but could not be localized by grade level.

In terms of ethnic group and family income variables, Black students made more changes and profited more from changing answers than Anglo students, the opposite of the hypothesized relationship. Family income differences in the number of answer changes were not significant, but students from low-income families made less gain from changing answers than students from higher-income families.

Implications of Results: The results from this study indicate that the answer-changing behavior of elementary and junior high students is very similar to that of undergraduate students. Thus, consistency is evident throughout the educational span. Students at all levels generally profit after changing answers on a standardized multiple choice test. There was no evidence to suggest that differences in minority-majority achievement may be due to a differential pattern of answer-changing behavior. Black students tended to make more changes than Anglo students, and in grade 2 they received significantly more benefit. In terms of family income, while low family income students change answers about as frequently as students from higher income families, their changes produced less benefit.

Implications for AISD: The ITBS was constructed by professional testmakers, with most items not prone to the successful use of testwiseness tips. To the extent that items on teacher-made tests are answerable through the use of testwiseness tips, the proportion of wrong-to-right changes may increase for those students who are quite testwise. These results do not supply information as to why answers are changed, the reasoning behind changes, or how answer-changing behavior may be modified. Teachers should encourage their students to check their responses and make changes if they feel they have not made the correct choice. Students should not be told to not make any response changes, nor should they be told to make changes because the changed answers will be correct 56% of the time.

The grade 2 ITBS administration may need to be thoroughly monitored. Students in grade 2 changed many answers relative to the total number of items on their test level. In addition, a higher proportion of answers were changed to the grade 2 items which were read to the students by the teachers than on those self-administered sections.

The Ontogeny of Conceptual Tempo and Object Relations: A Cybernetic Analysis of Response-produced Feedback in Family Interaction

Abstract

Mark Wernick

Participating Schools: Anderson, Austin High, Burnet Jr. High, Dobie Jr. High, Fulmore Jr. High, Johnston High, LBJ, Lamar Jr. High, Lanier High

Description of Study: The purpose of this study was to assess interaction patterns of families with children having reflective and impulsive learning styles to see if qualitative differences in those patterns exist. Object relations were also assessed, in keeping with theoretical aims of the study to see if reflectivity/impulsivity has an underlying relationship with early development and learning. Data from 14 families were analyzed, 8 families with an impulsive child and 6 families with a reflective child. All of the latter families were intact; three of the former families were intact. Kagan's Matching Familiar Figures test was employed to assess reflectivity/impulsivity. Mayman's Early Memories test was employed to assess object relations. A special motor learning apparatus was constructed, with which parents taught their child a novel task.

Description of Results: Analysis of the data revealed that the parents of impulsives communicated with their children, while instructing on the novel task, in ways sharply distinguishable from the parents of reflectives. The latter used more precise and true verbal information, and more authentic praise in the emotional realm. Parents of impulsives used more global and false information, and more false and contradictory praise. Mothers of impulsives alone gave more discouraging feedback than did mothers of reflectives. Impulsive children scored significantly lower than reflectives on the motor learning task. Object relations analyses showed that impulsive children and their parents were more represented at an early, oral period of object relations than were reflective children and their parents. A final analysis of general arousal showed mothers of impulsives to be significantly more aroused than mothers of reflectives both prior to and after the teaching task. Reflective children and their mothers were significantly calmer at the post-test, compared to their pre-test arousal, while impulsive children and their mothers showed no change in arousal from pre- to post-test. Sample size for fathers was too small to permit individual analyses.

Implications of Results: Should these findings prove replicable and generalizable, they enhance justification for whole family involvement in addressing a wide variety of learning problems. The object relations findings suggest that interventions must place great emphasis on special issues of nurturance and support for all family members in conjunction with attention to the more obvious communication difficulties.

Implications for AISD: The children sampled were, except for three, average children from regular classrooms. Three were intellectually average children who were in a special program for behavioral acting out. The children do not represent learning irregularities in the extreme, and most do not represent social irregularities in the extreme. It is possible that AISD and other school districts may benefit at some point from the establishment of a professional arm devoted exclusively to family outreach, family education, and family support, staffed by professionals and paraprofessionals skilled in the areas of family processes and early development. It seems inevitable that school psychological services, already attuned to the relevance and necessity of close work with families and teachers in the face of significant social and learning disturbances, must expand the breadth, depth, and scope of their services to include many of the heretofore manageable but marginal social and learning situations which may be harbingers of greater difficulties to come. Such an expansion of services constitutes an important step in the effort to establish preventive community mental health. Eventually it should be recognized as acceptable and desirable for even the healthiest of families to engage in a regular preventive transactional health program involving periodic family check-ups, much as regular medical and dental health check-ups are already recognized as acceptable and desirable by most people for individual preventive health care. Presumably the acquisition of additional research data along these lines will aid in guiding that enterprise.

The Impact of Basal Reader Characteristics on the Development of Reading Skill - A Longitudinal Study

Abstract

Connie Juel, Ph.D. and Philip Gough, Ph.D.

Participating Schools: Houston Elementary

Description of Study: The purpose of this study was to test a model of literacy acquisition. The model focused on both the interrelatedness of development in word recognition, spelling, reading comprehension and writing, and on how closely growth in each of these skills is influenced by incoming abilities, school developed skills, and basal reader characteristics.

Description of Results: This study has been approved for four years. The results reported here are for the first two years of the study. Phonemic awareness was found to be a powerful determinant of growth in knowledge of spelling-sound correspondence rules. Phonemic awareness is defined as the ability to attend to and manipulate sounds in the context of other sounds (e.g., the ability to substitute /k/ for /t/ in the word "part" to form "park"). Phonemic awareness heavily influences achievement in word recognition, spelling and reading comprehension through second grade. In first grade ability to recognize words is the strongest determinant of achievement in reading comprehension. By second grade, listening comprehension also makes a significant impact.

Implications of Results: The relationship between word recognition and spelling was shown to be especially strong, as both rely on similar sources of knowledge. The relationship between reading comprehension and writing was shown to be looser, as the generation of ideas involved in story production does not appear ismorphic to the processes involved in reading comprehension.

Implications for AISD: Exposure to print does little to increase ability to use letter-sound correspondence knowledge to decode words until a prerequisite amount of phonemic awareness is attained. In other words, children did not learn letter-sound relationships even though they had been exposed to significant amounts of print and LOMS - unless they had some phonemic awareness. In particular, minority children frequently appeared to be in special need of early oral phonemic awareness training.

on the Piagetian tests of concrete operational thought. That is, the children who exhibited the more mature performances (relative to other children) in the metalinguistic tasks between age 5 and 7 also gave more mature responses in the tests that tapped such cognitive abilities as conservation and seriation. Relationships between metalinguistic task performance and other measures, such as language comprehension and short-term memory span, were considerably weaker.

Implications of Results: Two kinds of developments that contribute to the emergence of mature metalinguistic behaviors were inferred from the data. The first development was suggested by the changes with age in the basis for children's judgments in several of the metalinguistic tasks. It is an increase in the ability to focus attention on utterances' formal linguistic properties, such as syntax and phonology, and use these features as bases for judgments in metalinguistic tasks.

The relationship found between metalinguistic performances and performances in the Piagetian tasks constituted the evidence for the second kind of development. Our interpretation of this result was that a common development underlies both the emergence of mature performance on metalinguistic tests and the growth of concrete operational reasoning. We have characterized this development as the emergence of a general cognitive ability, the capacity to engage in controlled, deliberate, reflective thinking.

Implications for AISD: In previous research, relationships have been found between the maturity of children's metalinguistic performances and their level of reading achievement, suggesting that abilities that contribute to reading also underly metalinguistic performances. It cannot be determined from our results that the two abilities inferred to underly metalinguistic performances are also ones that contribute to reading skills, or that fostering these two capabilities will improve reading achievement. Nonetheless, the results and conclusions of our study do imply that it would be worthwhile to consider the abilities to think about linguistic constructs and to engage in reflective thought in investigations of factors contributing to reading skills, and in the formulation of remedial procedures for children having difficulty in reading.

The Development of Metalinguistic Abilities in Children

Abstract

Kerry J. Washburn and David T. Hakes, Ph.D.

Participating Schools: Bryker Woods, Casis, Cunningham, Doss, Govalle, Gullett, Highland Park, Hill, Pillow, and Summitt Elementary Schools.

Description of Study: This study examined the development of several "metalinguistic" performances, behaviors that involve judging or playing with aspects of language. Judging whether a sentence is grammatical, producing and detecting rhyme, and judging whether a sentence is ambiguous are all examples of metalinguistic behaviors.

The intent was to obtain evidence on the nature of the abilities that underly these performances and their development in early-to-middle childhood. Children in the study were tested repeatedly between age 3 and age 7 on a variety of tasks. The task battery included several metalinguistic tasks, as well as tests of language comprehension, Piagetian tests of concrete operational thought (e.g., the conservation test), a memory span test, and other tasks.

Description of Results: Two findings constituted the major results of the study. The first was really a set of results, the changes with age in performance on the metalinguistic tests. For several of these tasks, the change in performance over time represented a shift from attending exclusively to the meanings of words and sentences when making metalinguistic judgments, to consideration of formal linguistic properties (e.g., syntax, phonology) as well. This shift in the basis for responses occurred for most of the children between the ages of 5 and 7. For example, in one task, we asked children to judge whether each of various sentences was acceptable ("grammatical"). When the children were 4 and 5 years old, they demonstrated a "plausibility" basis for judging acceptability. They would call a sentence acceptable if its meaning made sense. For example, they would judge sentences like The sleepy rock was in the middle of the road as "wrong"; however, they accepted sentences like The lady closed window, sentences that were syntactically incorrect but made sense, as "OK." Between age 5 and age 7, they began to correctly reject the latter kinds of sentences as "wrong," demonstrating the use of additional, syntactic bases for judging acceptability.

The other major finding concerned the relationships between changes in performance in metalinguistic tasks and performances on the various other tests that were included in the study. Most types of metalinguistic performances between age 5 and age 7 (the period during which these performances changed most markedly) were strongly related to performances

Children's Use of Conjunctions When Writing for Different Audiences and Purposes

Abstract

Pat O'Neal Willis

Participating School: Cunningham Elementary

Description of Study: The purpose of this study was to examine children's use of conjunctions in their writing. Conjunctions are of particular interest because they signal unique relationships between various chunks of meaning in a text. The establishment of these relationships plays a major role in binding the parts of a message into one coherent whole. Focus of this study was on the frequency, type, and pattern of conjunctive relationships fifth graders use when they are writing for different functions and to different audiences.

Description of Results: The primary objective of this study was to gain some rudimentary understanding of the ways children use conjunctions to bind the meaning units of a text into one coherent whole when they write. To accomplish this task, three separate rounds of scoring were undertaken. These three passes through the data examined the overall coherence of texts written to different audiences for different purposes, the functional uses to which students put conjunctions in composing each text, and the levels (sizes) of the meaning units bound by these conjunctions. A brief explanation of these three rounds of scoring is offered below so that the reader may better understand the findings that resulted from their analyses. Four hundred fifty texts composed over a six-week period by one fifth-grade language arts class comprised the data that was scored by each of the three methods described below.

First, each of the 450 texts was scored wholistically by three raters. (The raters were elementary classroom teachers.) The purpose of this pass through the data was to ascertain the degree of coherence of each text.

Next, every conjunction in each of the 450 compositions was classified according to the function it performed in linking meaning units in the text. For this second round of scoring, two superordinate and five subordinate conjunctive functions were designated. The two superordinate functions were labeled external and internal. External conjunctions were defined as being content bound. They occur at meaning-dictated junctures in the text, combining information units in such a way that they form a coherent unit of thought. Internal conjunctions are not dictated by content, but rather by an individual author's plan for writing. Their function is to join information units in the order in which a writer would like to have them appear in the text. Four of the subordinate categories function both externally and internally. A

fifth subordinate category, continuatives, has only the internal function. The subordinate conjunctive categories were defined as additive (simple addition of information), temporal (sequential linking of information), causal (information joined in a cause-effect relationship), adversative (information units related by virtue of their opposition to one another), and continuative (conjunctions signalling that a unit of information is continuing). Two readers trained in this classification system each read 230 texts, identifying and labeling each conjunction as it occurred. Interrater reliability on this round of scoring was .80.

Finally, each conjunction in the 450 texts was reexamined to determine the levels of meaning it tied. For this final round of scoring, five levels of meaning were established, ranging from connections linking single concepts (e.g., mom or dad) to conjunctive ties which brought the entire text forward and linked it to a final summary statement (e.g., And that's what I like about the dentist's office). As was done in the second round of scoring, two trained raters each read 230 texts, making decisions regarding the size (i.e., level) of the information units linked by each conjunctive tie. The interrater reliability for this final round of scoring was .85.

The data from these rounds of scoring were analyzed in three major ways: descriptively, inferentially, and correlationally. To examine rated coherence, a 2 x 3 x 3 analysis of variance was run on 18 lessons written for different audiences and functions. No significant differences were demonstrated in the coherence of students' texts when writing for various purposes and audiences. This was a surprising finding. At the outset of the study it had been anticipated that function and audience might have some bearing on the "intactness" of the texts students would compose. However, means for rated coherence ranged from 3.41 to 3.70 and were all relatively high on the 5-point coherence scale. Of the 450 texts examined, only 62 were rated below 3.0.

The next analysis was concerned with students' usage of various types and levels of conjunctive tie. Here, the comparison related the mean proportion of type and level of conjunction to total number of words and total number of conjunctions.

Overall, the mean proportion of conjunctions to total words was .09. Of this percentage, two-thirds were at Levels 2 and 3. That is, two-thirds of all the conjunctions used by students joined meaning units within sentences or within episodes. It is understandable that the preponderance of conjunctive ties was at this intra-episode level since Level 4 ties link whole episodes and Level 5 connections join summary statements to the message as a whole.

Only 1% of all conjunctive ties were at Level 1. This finding suggests that novice writers do more with these connectors than link single concepts (e.g., toast and jelly).

Nearly half (45%) of the conjunctions used were additives. Next highest in frequency were temporals (26%). Sixty-three percent of all conjunctions were external. This suggests that children's writing at this level of development is largely content driven.

To test the effect of audience and function on type of conjunction, several analyses of variance were run. From those analyses, these were the most interesting findings.

First, the ANOVAs suggested a significant difference for function in terms of the proportion of external conjunctions to the total number of words, $F(2, 408) = 52.04$, $p < .001$. The mean proportion of external conjunctions was 5.6% for the describe lessons, 8.1% for the express feelings lessons, and 8.5% for the story writing lessons.

Second, there was an interesting interaction between function and audience for the proportion of internal conjunctions to the total number of words. That is, there was a significantly greater number of internal conjunctions for the describe assignments than for the express feelings and story writing assignments. The single exception to this trend was the describe to a kindergarten student assignments. This proportion was much lower than the describe assignments to peers or adults. The proportion of internal conjunctive ties on the describe to kindergarteners task was the same as the proportion of conjunctions on the express feelings to kindergarteners assignments.

Intercorrelations among proportions of types and levels of conjunctions highlighted several interesting relationships. Levels 2, 3, and 4 were strongly related to the external category, again inviting consideration of the content-driven nature of children's writing. Only Level 1 was strongly related to the internal category and negatively correlated with the external function. There was a negative correlation between Level 4 and the internal category.

Similar patterns emerged when types of conjunctions were correlated with level of use. Strong relationships emerged between additives and Levels 1 and 2. Level 3 was strongly related to causal conjunctions, reflecting student writers' tendency to establish cause-and-effect relationships between units of meaning within episodes. A significant relationship was noted between temporal conjunctives and the use of Level 4 ties. This suggests a trend among student writers to link textual episodes by means of time sequences.

A final observation is that neither level nor type of conjunction was related to rated coherence scores. This is an interesting finding which may stem from the fact that the mean coherence level across students texts was high. It would be useful in future study to compare use of conjunctive levels and types in texts that vary widely in level of coherence.

Implications of Results: In summary, findings from the three rounds of scoring incorporated into this study indicate that fifth graders can write to a variety of audiences for various purposes in a coherent fashion. Next, their writing is content driven, as indicated by the greater preponderance of conjunctives that are external rather than internal. This is particularly true when they are writing to express their feelings and tell a story rather than describe. Also, findings suggest significant relationships between conjunctive types and the levels of meaning they bind.

Most notable is the observation that student writers can use all types of conjunctives meaningfully. This suggests that they have a basic understanding of how to connect chunks of information in complex relationships. That is, they can link meaning units by adding them together, by setting them in opposition to one another, by implying causality, by establishing temporal sequences, and by indicating that the message they have begun is continuing.

Finally, these findings suggest that, under optimal writing conditions, fifth grade students can and do use conjunctions correctly and effectively when they are writing. It is striking to note that out of the thousands of conjunctions used by students in composing the 450 texts that made up this study, only five were used incorrectly or in a non-meaningful manner.

Implications for AISD: These findings must be considered tentative since they are based on the writings of only twenty-five students. However, consistency of performance across the 450 texts analyzed suggests that students may understand more about using conjunctions and writing coherent texts than educators realize. It is important to remember that these students were writing under optimal conditions. The writing environment was relaxed and positive. Children were allowed a voice in topic selection. Mechanics were de-emphasized to free students to concentrate solely on style and content. The quality of writing produced under these conditions suggests that our instructional methods may be failing to tap what children already know about composition. We may be spending valuable instructional time on skills children already have mastered.

For the past two years, teachers in AISD have been trained in an instructional technique patterned after the writing conditions described above. These teachers are reporting results similar to those observed in the present study. An interim report of those observations may be found elsewhere in this volume.

BIOLOGICAL INVESTIGATIONS IN HIGH SCHOOL CLASSROOMS: A COOPERATIVE EFFORT OF TEACHERS, STUDENTS, AND SCIENTISTS

Interim Report

Kathleen A. O'Sullivan, M.A.

Participating Schools: Anderson High School, Crockett High School, and Travis High School.

Description of the Study: The purpose of this study was to evaluate the effects of cooperative biological investigations on high school biology teachers, students, and university scientists. Three investigations were conducted: (1) an insect collection at Travis High School in October, 1983; (2) an examination of seagrass seed reserves at Crockett High School in February, 1984; and (3) a measurement of buckeye floral structures at Anderson High School in April, 1984. All of the investigations included (1) teacher-presented lessons on the topic, (2) teacher demonstrations of data collection procedures and techniques, (3) student collection and recording/preparation of data, and (4) two presentations by the cooperating scientist, one prior to and one following data collection on the purpose and results of the investigation, respectively. For some of the classes in each investigation, these presentations were live; other classes viewed videotapes of the presentations. Ten classes and four teachers participated in insects investigation, fourteen classes and six teachers participated in the seeds investigation, and six classes and three teachers participated in the flowers investigation. For each investigation, measures of science processes understanding, attitudes toward science (four scales for students, seven scales for teachers), and reactions to the investigation (questionnaires) were administered to participating and control (first two measures only) teachers and classes. The three scientists were interviewed to evaluate the student-collected data and to elicit their reactions to the investigations.

Description of Results: Analyses on adjusted class means, N = 34, for all three investigations indicated no significant differences on the science processes and the four scales of the attitudes toward science measures among the insects, seeds, flowers, and control classes. For the Attitude to Inquiry Scale of the attitudes measure, the live group mean score was significantly ($p = .033$) more positive than the videotape group mean score. No significant differences between participating and control group teachers were found for the science processes measure or for six scales of the attitudes measure. Participating teachers scored significantly ($p = .028$) higher than control teachers on the Attitudes toward the Social Implications of Science scale. The overall response of students to the investigations themselves, as measured by the questionnaires, was positive, with over half the students in all three investigations reporting that they enjoyed learning about the topic in this way and that they would like to participate in a different investigation with another scientist. On the teacher

questionnaire, all thirteen teachers agreed that they enjoyed participating, working with the scientist, and working on an open-ended investigation. All but one teacher, who was uncertain, felt that the experience was worthwhile for students, and eleven teachers felt the experience was worthwhile for themselves (others uncertain). Twelve teachers believed they had made a genuine contribution to a scientist's research, and eleven believed the same for their students (others uncertain). All three scientists stated that their participation was worthwhile in terms of the data collected by the teacher-supervised students, with some limitations. They also reported that they enjoyed the experiences and would have agreed to participate had they known at the beginning what the investigations would entail. Teacher questionnaire data and responses from the scientists suggested some modifications in timing, task nature, topic, and videotaping for future investigations.

Implications of Results: It appeared that the research experiences as provided in this study have no effect on students' or teachers' understanding of science processes as measured by the instrument utilized. The effect on these participants' attitudes to science appeared to be minimal as measured by the instrument utilized. The difference for students on the Attitude to Inquiry Scale favoring the live treatment group, as well as data from the questionnaires, suggested that the use of videotapes diminished the impact of such experiences on students. Teacher attitude toward the Social Implications of Science seemed to be enhanced by participation. There was strong descriptive evidence from the questionnaires that teachers and students enjoyed the experiences and that teachers perceived them as worthwhile for themselves and their students. The interview data indicated good support for the investigations from the scientists. Cross-supporting descriptive data suggested modifications in the experiences which could possibly strengthen effects of the investigations for the participants. While the statistically tested findings mitigated the positive findings in the questionnaire and interview data, these descriptive data did suggest that such experiences have potential as an alternative, enjoyable approach to instruction in biological content utilizing an inquiry strategy.

Implications for AISD: The biological investigations of the study seemed to have little or no effect on high school biology teachers' and students' understanding of science process skills and attitudes toward science as measured by the instruments used. However, the teachers did consider the experiences as worthwhile for themselves and their students, the students did report them as enjoyable, and the scientists perceived them as viable. It should be noted that the students involved were intact classes; the investigations were intended for all students, not just the gifted and talented. Considering reservations and suggestions for modification, further cooperative efforts between AISD biology teachers and students and University of Texas at Austin scientists may well have potential value for all involved.

Organizational Factors Associated with Student Attitude and Alienation in Alternative Schools

Jimmie L. Todd

Participating Schools:

Robbins Alternative School and nine other alternative schools in Texas that had been in operation five or more years.

Description of Study: The purpose of the study was to determine the relationship of the organizational bureaucratic characteristics to the students' attitude toward school and their alienation from school. Three phases of the study existed. The first component examined the gross effects of alternative schools on the demographic variables. The second component of the study examined the school and the bureaucratic elements of the school to determine if a significant relationship was present between them and the students' attitude toward school and their alienation from school. The third component involved clinical interviews with randomly selected staff members to determine how closely the organization related to a set of idealistic elements of alternative schools. Students provided primary data regarding their attitude toward school and their alienation from school. The faculties of the ten schools provided data regarding the school's control ideology, hierarchy of authority, rules and regulations, and organizational impersonality. Demographic variables of length of enrollment, frequency of attendance, and ethnicity were related to the students' attitude toward school and their alienation from school.

Description of Results: The results of the study and its implications will be released about September 5, 1985.

The Effect of Brief, Structured Writing Practice on Children's Written Composition

Interim Report

Pat O'Neal Willis

Participating Schools: Brooke, Becker, Cook.

Description of Study: The purpose of this study is to examine the effect of a year-long writing program on the overall quality of children's written compositions. The program was incorporated into the curriculum of one sixth grade teacher who had complete charge of its daily administration.

The treatment consisted of brief, consistent, structured writing practice administered three times per week. Each session was introduced by means of a guided fantasy which was used as a catalyst for text design. Following the presentation of the guided fantasy, students wrote for ten minutes without stopping. They were allowed to write about the topic presented in the fantasy or about another topic of their choice. The goal of each ten-minute session was to produce the first draft of a text. Mechanics of writing (i.e., handwriting, spelling, and punctuation) were de-emphasized during this initial writing period. De-emphasizing mechanics was important because it encouraged writers to devote their whole attention to creating the message conveyed by the text. Guided fantasy was important because it allowed students to experience textual content before they wrote about it.

The effect of this treatment is being measured by comparing the target group to two control groups where different types of writing practice have been used as a part of the regular curriculum. Two teachers, who are considered outstanding educators, volunteered to participate. Their participation in the study allowed a check of whether any improvement observed in the treatment might be attributed simply to teacher effects. In the first control group, brief unstructured daily writing practice took place. This practice involved students' writing in journals. In the second teacher's classroom, daily writing was not a practice. Writing in this classroom consisted of weekly assignment of formal papers which were submitted to the teacher for a grade.

The comparison of writing ability among the three groups is being measured by analyzing students' performance on five formal, in-class writing assignments administered during the spring at one-month intervals. The product of these combined assignments was 330 written texts.

Status of Study: Data for this study have been collected and are currently being prepared for scoring and analysis. It is anticipated that data analysis should be completed by February 1, 1986. Target date for completion of the project is April 1, 1986.

Impact of the Data Collection Procedure: A videotape describing the instructional method used with the treatment group was completed in January, 1985. The tape, entitled "Writing Aerobics," was aired on AISD's educational channel this spring.

Due to the success demonstrated by the treatment group, two principals requested and obtained permission to expand the program on a six-week trial basis. This pilot project was designed to impact more teachers and students and to expand the scope of the Writing Aerobics technique to include peer editing and second draft revision for content. Late in the spring of 1985, four teachers were trained to use the Writing Aerobics technique with their students. Two teachers were based at Brooke and two at Ortega. Three were regular classroom teachers (6th grade) and one was a Chapter I reading teacher. The Chapter I teacher used the program with the eleven 4th-grade students who ranked lowest on the Iowa Test of Basic Skills (ITBS) at Brooke. Approximately 90 students were involved in this six-week pilot study. In addition to the Chapter I students, the sample group included one Aim-High class from Brooke, and a high-middle to middle level group, and a low-middle to low-achieving class from Ortega. Approximately one-third of these 90 students scored below the thirtieth percentile in reading and language arts on the ITBS.

The four teachers were trained by means of an orientation inservice, demonstration lessons, and guided implementation of the technique with their own language arts classes.

In addition to the student writing program, an adult writing group was established to allow teachers to experience the writing program first hand. Teachers wrote at home on a topic of their choosing and shared that composition with fellow writers in the group. Meetings were held on a weekly basis over a seven-week period.

Teachers and students were surveyed before and after the pilot project to assess the effectiveness of the intervention on teacher and student participants. Results of those surveys are summarized below.

Impact on Students:

(1) There was a positive effect, across the board, on students of all ability levels. Without exception, at the end of six weeks, all 90 students were writing better, revising better, listening better, and commenting more knowledgeably on the literary features of other students' texts.

(2) There was an air of mutual respect and "professional acceptance" that developed as students came to know one another as literary beings.

(3) Students' development of pride in their own compositions was noticeable.

(4) Teachers noted an emergence of shy, withdrawn students into the mainstream of classroom life that occurred through sharing compositions.

(5) The writing program became a socially acceptable vehicle for expressing feelings.

(6) The program offered an opportunity for teachers and peers to provide each student with positive, ego-boosting individual attention two to three times weekly through sharing compositions orally.

(7) There was a total absence of discipline problems during writing and sharing times.

(8) Teachers noted the coherence of student compositions, irrespective of ability level.

(9) There was an increasing desire by students to hear positive comments and constructive criticism regarding their own work.

(10) Teachers commented that peer critiquing had a generalized impact on the writing of students who served as audience.

Impact on Teachers:

(1) All teachers were enthusiastic about the results of the experiment and intend to continue the program next year.

(2) There was increased interest on the part of teachers not included in the project.

(3) There was high interest and strong desire to continue the adult writing group next year. Teachers felt this group helped them to enjoy writing more and feel more confident and relaxed about writing. They felt motivated to write due to their commitment to the group. Teachers commented that listening to and critiquing others' writing helped them to improve their own listening skills. Participation in the group caused teachers to stretch themselves intellectually. It also offered a forum where they could get to know other professional educators in a more personal way. This caused them to feel less isolated professionally.

(4) Teachers commented that they saw the adult writing group as providing a forum where educators, through writing, could express and share personal and professional ideas, thoughts, frustrations, and hopes. They viewed this collegeal networking as an opportunity for professional growth.

Impact on Principals:

(1) The two principals involved at Brooke and Ortega were enthusiastic about the results of this pilot project and wish it to continue next year.

(2) The principal of Maplewood is interested in joining the project. She is especially interested in learning the technique herself so that she can share it with her staff. She would like to include in the project one teacher of the visually impaired, one resource teacher, and one regular classroom teacher.

Implications for AISD

(1) Staff might be expanded to include regular teachers from grades 4-6 as well as special area teachers and principals. Teacher networking could be encouraged through establishment of other adult writing groups.

(2) Academic content should be expanded to include these writing tasks: rough draft composition, second drafts (revised for content), and third drafts (revised for mechanics). Sharing could be done in both large and small group settings. This writing technique could be expanded to include other content areas (e.g., social studies and science).

(3) Written products could include a kit for grades 4 to 6 (story starters, manual, audio tapes of story starters), a monograph on facilitating emotional growth through written composition, and periodic journal articles.

EVALUATING CHILDREN'S COPING STYLE

Abstract

James E. Gilliam, Ph.D.

Participating School: Webb Elementary School

Description of Study: The purpose of this research was to gather data on the concept of coping. Specifically the researcher was interested in determing how elementary age students respond to social stressors. An experimental edition of the Test of Coping Style was designed and administered to 66 students at Webb Elementary School. The Test of Coping Style is a 24 item open-ended questionnaire which asks students what they would do in response to a stressful event. For example, "What would you do if someone tried to pick a fight with you?" Items of this nature were posed and the students wrote in their answers.

Description of Results: Data are currently being analyzed. Preliminary analysis indicates that the sample subjects utilize ten basic styles for coping with stressful social events. These styles and behavioral examples are:

Aggression- take some form of action to remove the source of the stress. (eg. fight, swear, insult, etc.)

Assertion- do something to inform the person that what s/he is doing is not liked by the subject. (eg. confront the person, tell him/her what it is that is not desired; ask the person to stop doing whatever it is that is causing stress.)

Compliance- obey or succumb to the demands made by the person. (eg. go along, let him/her have his/her way, give in.)

Control- take some action to gain some control of the situation. (eg. call for help, tell someone what is happening, problem solve.)

Denial- say or do something to not recognize the stess. (eg. pretend, try to make the person laugh, make excuses.)

Emotion- react with some strong feeling. (eg. cry, get angry, feel hurt, feel guilty.)

Ignore- not respond. (eg. move away, be quiet, not do anything.)

Non Compliance- do something in opposition to what the person expects. (eg. defy, argue, disobey,)

Withdrawal- withdraw and attempt to avoid the situation. (eg. be quiet, pout, sulk.)

These common or basic styles of coping are being further analyzed to determine what common factors are present.

Implications of Results: Elementary age school students do appear to use certain styles of coping when reacting to stress. Given knowledge of an individual student's coping style, teachers can better prepare for interacting with the student, and can plan behavioral strategies to accomodate the student's needs and develop activities to teach the student more adaptive coping methods.

Implications for AISD: If further data analysis confirms that certain students predictably respond to social stress in school by specific coping techniques and the Test of Coping Style can identify what students are likely to react in what ways, preventive planning can occur to lessen disturbances in school.

Characteristics of Limited English Proficient Students in LD, MR, and SH Programs

Abstract

Alba A. Ortiz, Ph.D.

Participating Schools: The population for this research effort is handicapped Hispanic students in grades two through five who are being served by Austin Independent School District in classes for the communication disordered, learning disabled, or mildly mentally retarded. There is no direct involvement of schools as all student data is obtained from central office files.

Description of Study: The ultimate purpose of this study is to identify referral, assessment and intervention practices that prove to be effective to the provision of special education services to limited English proficient (LEP) and bilingual students. Data describing the entering characteristics at the time of initial placement of a population of approximately 360 mildly mentally retarded, learning disabled, and communication disordered students currently being served in AISD were collected during the 1982-1983 school year. The various assessment practices, instruments, and procedures used by the district in referral, assessment, and placement of LEP and non-LEP Hispanics in special education were examined. During the second year of the study, follow-up data were collected for all students who had had a 3-year reevaluation.

Description of Results: Data collected during Year 1 are currently being analyzed. Data collection for the follow-up study is in progress. The product will be a description of critical variables related to referral, assessment, and placement of Hispanic students in MR, LD, and SH programs in the district. This report will also include a discussion of factors which predict which students, upon reevaluation, will be dismissed or will have greater or lesser involvement in special education. The most frequent types of special education intervention, determined from analyses of annual goals and objectives found in individualized education programs, will also be described.

Implications of Results: Several major contributions to the field of special education are anticipated from this research project. The first is an empirically derived data base of knowledge and information which deals with service delivery to exceptional Hispanic students. The results will generate data-based recommendations associated with best practices in the identification, assessment, placement, and service delivery to exceptional Hispanic students.

Implications for AISD: Several benefits related to student education are projected for AISD. It is anticipated that the project will provide a comprehensive analysis of the characteristics of LEP and non-LEP students who have been identified and placed in AISD programs for the mildly mentally retarded, learning disabled, and communication disordered. Another benefit will be the identification of those linguistic, cultural, cognitive and other factors that should be incorporated in the design of optimal assessment and intervention practices used by the school district. On-going staff development and consultation services related to the education of handicapped Hispanic students will be available at no cost. The Handicapped Minority Research Institute will also provide the district with annual comprehensive reviews of the literature specific to referral, assessment, placement and instruction of language minority students in special education. Copies of all written products developed during the course of this research project will also be provided.

This study is being conducted by the Handicapped Minority Research Institute on Language Proficiency, Department of Special Education, The University of Texas at Austin.

Relationship Between Multiple Risk Factors and Child Outcome for Children of Adolescent Mothers

Abstract

Anne Martin

Participating Schools: Johnston High School, Travis High School, and Allen Elementary School Teenage Parent Program.

Description of Study: Numerous studies have identified children of adolescent parents as a group at risk medically, cognitively, and socially. However, little research has looked at differences within a group of children of teenage mothers in order to predict which children are at greatest risk. The purpose of the present study is to examine the relationships existing among variables identified in the literature as risk factors for the children of young mothers and the children's developmental outcome. The study seeks to determine if certain clusters of risk factors (environmental, maternal, or child factors) are most predictive of developmental delay.

Description of Results: Data collected from participating Austin I.S.D. students have been combined with data from other young mothers and their children in the Central Texas area for a total of 92 teenage mothers interviewed and 92 children screened. Data analysis has not been completed at this time.

Implication of Results: Results of the study will be of use to service providers in identifying which infant/adolescent mother dyads are in greatest need of services and in suggesting appropriate goals for intervention strategies.

Implications for A.I.S.D.: Results of the study should be of use to the A.I.S.D. programs serving teenage parents and their children by suggesting which factors and combinations of factors are most important to address in preventing developmental delay in the children of teen parents, and by providing a profile of high-risk characteristics.

MANAGING ACADEMIC TASKS IN HIGH SCHOOL

Abstract

Walter Doyle, Julie P. Sanford,
Jan Nespor, and Barbara Schmidt French

Participating Schools: Crockett, LBJ, and Anderson High Schools

Description of Study: This study examined the problems that high school teachers face in designing and managing academic assignments. It was the second phase of a study of how curriculum is translated into classroom tasks in secondary schools, with particular attention to work that is supposed to give students opportunities to use higher cognitive processes. One experienced high school English teacher and two experienced high school science teachers were selected from nominations by subject coordinators, high school principals, and university student teacher coordinators. One classroom of each teacher was observed daily during about a 6-week unit of instruction. Data included focused classroom narrative records, inspection of instructional materials used, graded student work, formal interviews with the teachers and brief interviews with selected students about specific assignments. Data analysis produced task and task system descriptions, case studies, and reports focusing on conduct of comprehension level work in secondary classrooms.

Description of Results: Although there were differences between the junior high (Phase I) and high school (Phase II) results, similar sets of problems were seen to exist in classrooms where teachers tried to engage students in comprehension level work. Even under the best of circumstances, planning and conducting comprehension level tasks in secondary schools is not easy. Results often fall short of curricular goals. When teachers in this study engaged students in work that was supposed to be comprehension level, it was accomplished by the teacher (a) creating an aura of accountability around the work to force students to attempt it, and (b) providing a variety of safety net devices to keep students from failing at the work.

Implications of Results: Some strategies for managing classroom assignments reduced students' opportunity to try higher level work. Some strategies also reduced students' understanding of their work or teachers' ability to monitor students' understanding. Decisions about managing tasks can make a great difference, and these decisions would appear to deserve more direct attention than they receive from teachers and teacher educators.

Implications for AISD: The development of higher level cognitive skills in students is a goal of the secondary curriculum in AISD. Based on this study, two reports currently in progress should be directly useful to instructional supervisors and teachers in the district. One by Walter Doyle, to be published in the Effective Schools Sourcebook, combines the results of research on classroom management and academic work to produce recommendations for conducting and supervising instruction in secondary classrooms. The second report by Doyle and Sanford will emphasize practical applications of the Managing Academic Tasks studies for supervisors and teachers concerned with providing high quality learning opportunities for secondary students. Copies of both reports will be provided to AISD ORE and Secondary Instruction offices as soon as they are available.

STUDENT'S STRATEGIES FOR USING TEACHER FEEDBACK

Abstract

Ellen D. Gagne, Joella M. Anzelc, Robert J. Crutcher,
Cynthia A. Geisman, Vicki Hoffman, Lloy Lizcano, and
Paul Schutz

Participating Schools: Crockett High School

Description of Study: This study examined how students use teacher feedback in learning computer programming. Students were observed while the teacher was going over the answers to unit tests. These observations were coded into several categories of on-task and off-task behavior for attending to feedback. Students' overall attention to feedback, their attention to feedback on test items that they got correct, and their attention to feedback for items they missed were each correlated with final achievement in the course. Also, a subset of students were interviewed following two feedback sessions to determine whether the students' own reports of their behavior agreed with our behavioral observations, to determine more precisely the kinds of mental processing students engaged in during feedback sessions, and, finally, to determine whether there was any relationship between their reported mental processing and their final achievement in the course.

Description of Results: Behavioral measures of attention to feedback did not correlate significantly with final achievement in the course. However, the reports of the students' mental processing, when coded into categories (those that were non-facilitative of learning, those that were moderately facilitative of learning, those that were highly facilitative of learning) did correlate with their final achievement in programming. Specifically, students who succeeded in understanding their errors during feedback were more successful in the course than were students who tried to rotely memorize feedback. The students' approaches to feedback were not correlated with math achievment test scores, suggesting that aptitude does not account for the observed relationship.

Implications of Results: This study involved a heterogeneous class: some of the students had had previous programming experience, some had not; and scores on the national math achievement test varied widely. Since the backgrounds of the students were varied, teacher feedback may have been less appropriate for some students than for others. The reports from the students revealed, for example, that some of the more successful students, who seemed to not pay attention, had already corrected their mistakes before the feedback sessions began. Some of the less successful students, who were observed to be paying attention to feedback, reported that they didn't understand what the teacher had said, so they had just copied everything down.

Implications for AISD: The results presented above are tentative; however, they suggest some possibilities for schools wishing to improve the quality of instruction in computer programming. First, attention to teacher feedback during instruction does relate to learning--especially when the feedback relates to mistakes students have made. Secondly, this feedback should be appropriate: that is, the students need to understand the feedback to use it effectively. Making feedback appropriate for all students in a heterogeneous class is probably more difficult than in a homogeneous class, not only because some students will understand the feedback and others will not, but because those who understand may turn their attention elsewhere after correcting mistakes. For subjects such as computer programming, where feedback seems crucial to success in learning, it may be better to have more homogeneous classes, or, alternatively, in heterogeneous classes, to not provide feedback to the entire group at once, but instead provide feedback to smaller groups of students who have made similar kinds of mistakes. A final implication is that teachers may wish to inform students of the benefits of using feedback to understand errors. Some students may be unaware of the significance of feedback for learning.

Neuropsychological Deficits and Spelling Performance of Dysphonetic Learning Disabled Children

Abstract

Cheryl Hiltebeitel, M.A.

Participating Schools: Cunningham, Langford, Oak Hill, Odom, Walnut Creek, Williams, and Winn Elementary Schools

Description of Study: The purpose of this study is to examine characteristics of learning disabled fourth- and fifth-grade boys who demonstrate an inability to produce phonetically accurate spelling on the Boder Test of Reading-Spelling Patterns (dysphonetic subtype). Children who participate in the study are being given the Boder Test and a cluster of four tests of auditory-verbal functioning which have been used in neuropsychological subtyping research. Their scores from individually administered tests of intelligence and achievement obtained from school records also are being utilized in the data analyses. Results of the study are expected to provide a profile of this disability subtype and delineate the test(s) most powerful in discriminating this type of learning disabled student from normally-achieving students.

Progress Report: During the course of the academic year, nine AISD elementary schools were contacted. Permission forms were sent to the parents of learning disabled and normally-achieving male students attending fourth and fifth grades in the schools that chose to participate. Permission forms were returned from a total of 81 parents. At the May 1 deadline for data collection, 63 children had been tested; testing could not be completed at the last school contacted. Examination of intellectual and achievement data utilized for classification purposes resulted in the exclusion of 20 children from the subject pool. Scores from nine additional children have not yet been examined. At this time there is an insufficient number of subjects necessary to perform the proposed data analyses. Efforts are under way to obtain data from additional children.

A Descriptive Study of Visual Behaviors of Children with Down Syndrome

Abstract

Marie Welsch, M. Ed.

Participating Schools: Cassis Early Childhood, St. John's Early Childhood, Development Center, St. Elmo Elementary, Wooten Elementary

Description of Study: The purpose of the present study was to describe the performance of Down syndrome children, ages 3 to 9, in terms of a variety of visual behaviors. The visual behaviors were those making up the Diagnostic Assessment Procedure (Barraga, 1980), a criterion-referenced instrument containing 40 items. There were 61 children in this study, from AISD and 12 other school districts.

Description of Results: There were 8 items which 55 or more children passed, 5 items passed by 25 to 43 children, 14 items passed by 9 to 24 children, and 12 items passed by less than 9 children. There were 27 items partially passed by different numbers of children. Many of the items asked the children to match an answer to the stimulus object or picture, and this was the most successful type of answering strategy. Matching was more successfully performed than fine motor skills of drawing shapes and designs. The older a child, the higher their mental age, and the longer their participation in educational services, seemed most often related to more correct responses. Items involving one-dimensional answers, pointing or naming were answered correctly, by as many as 43 children. Those items involving manipulating puzzles, blocks to make designs, and copying designs and letters were passed by 5 or fewer children. The assessment items were grouped in terms of sections, corresponding to visual developmental milestones, from birth to age 7 (based on normal visual development). At least 55 children passed Sections A and B; Section C was passed by 19 children; Section D, by 9 children; Section E, by 2 children; Section F, by 9 children; Section G, by 4 children; and no child passed Section H.

Implications of Results: As Down syndrome children get older, their visual abilities improve, especially if they have been receiving educational services. Some types of items are more easily performed by Down syndrome children, such as matching similiar objects and pictures. Other behaviors, such as sequencing, categorizing, puzzle solving, and block designs, are more difficult. The type of visual tasks a child is asked to do shoud be analyzed in terms of complexity and responses needed by the child to answer correctly. Visual skills of Down syndrome children should be taken into account when planning individual educational plans.

Implications for AISD: In light of these results, assessment of specific visual skills of each Down syndrome child would assist in more complete educational planning. Providing a wide variety of tasks which utilize visual abilities a child needs to work on would assist the child in incorporation of his abilities in a wide variety of situations. The curriculum available with the Diagnostic Assessment Procedure (Barraga, 1980) has over 200 suggestions for objectives which could be used to assist Down syndrome children's use of their visual abilities.

CAREER INTEREST SURVEY

Abstract

Robert M. Kelley, Sr., Exploring Executive
Capitol Area Council, Boy Scouts of America
7540 Ed Bluestein Blvd., Austin, Texas 78723

Participating Schools: The following schools in the Austin Independent School District participate in the annual career interest survey of students in the 9th, 10th and 11th grades. The figures after each school are the number of student survey forms processed during the 1983-1984 school year which total 9402 forms.

SCHOOL	STUDENT FORMS	SCHOOL	STUDENT FORMS
Anderson	1,237	L.B. J.	616
Austin	953	McCallum	928
Crockett	1,347	Reagan	902
Johnston	890	Robbins	89
Lanier	1,194	Travis	1,246

Description of Study: The career interest survey detrmines the career and hobby interests, and plans after high school of students in the 9th, 10th and 11th grades. Each student completes a Mark Sense Student Interest Form which takes about 10 to 15 minutes. The purpose of this survey is to:

1. ...Provide each school, at no cost, a listing of its students' career choices to support the school's efforts towards effective career education.
2. ...Provide a listing, by interest groups, of students' names, addresses, etc.. This information is used to invite students to join Explorer posts in their interest area.
3. ...Provide a market analysis to determine the kinds of Explorer posts that are needed.

Description of Results: Based on this survey, students are invited to join Explorer posts that provide them with some insight and practical experience in the careers they have indicated. It is intended that these Explorer posts function as a supplement to the schools' career education program. The reports provided to the schools include information which can help counselors with individual students and can support curriculum and career education plans. The career interest survey information is kept confidential. The Capitol Area Council of the Boy Scouts of America uses the information only to determine Explorer posts that need to be organized and to invite students to join Explorer posts. All inquires from other organizations and individuals for information derived from the career interest survey are referred to the Austin Independent School District.

Implication of Results: The career interest survey has allowed several thousand students to be exposed to programs conducted by community organizations utilizing the Exploring program to match the interests of students with the resources of the organization. As a result of these programs, students are able to gain insight into a particular career including requirements such as a college degree and, therefore, are better able to evaluate their interest in the career.

Implications for AISD: The schools receive several reports to aid them in counseling individual students on career plans including inviting them to enroll in specific classes, in fulfilling inspection requirements, and in determining student interests in planning curriculum and career education. The career interest survey has been essential in organizing Career Awareness Exploring programs at Lyndon Baines Johnson High School and W. R. Robbins School. The Career Awareness Exploring program consists of career seminars conducted at the school with the speakers provided by the Exploring Division of the Capitol Area Council, Boy Scouts of America.

An Observational Study of the Teacher as Model of the Comprehension Process

Abstract

Nancy L. Roser, Ph.D.

Participating Schools: Casis Elementary

Description of Study: The purpose of this investigation was to both observe and describe the language of teachers and young children as they responded to literature during the storytime in kindergarten and first grade. In addition, the language of two teachers was transcribed and analyzed to discern the teachers' attempts to model the comprehension process. Teachers read a total of 24 books, varying in genre and teacher-pupil previous familiarity with the titles. Storytime was either audio- or videotaped. A system of analyses provided for categorization of pupil and teacher talk according to form, type, and focus. Further, teacher language was sorted to induct a teacher-model of the comprehension process.

Implications of Results: Although final analyses are not yet completed due to the number of transcriptions, results indicate these teachers of young children demonstrate a wide range of attempts to ensure comprehension of stories and books read aloud. These behaviors included activating background knowledge, clarifying vocabulary, encouraging speculation, prediction, comparison making and supporting inferences, and linking literature thematically. Children in both classes demonstrated levels of comprehenison typically connected with higher grade and achievement levels. The storytime comprehension behavior of these prereaders and early readers then do not corroborate existing literature which indicates that comprehenison is not taught. Both teachers indicated well-developed models of teaching reading comprehension and these language behaviors correlate with childrens' responses to text shared aloud.

Implications for AISD: Researchers have just begun to study storytime (sometimes called a "literacy event") as a possible crucial element in children's acquisition of reading. If teachers are to better help children become increasingly literate, they must become more sensitive to the ways of orchestrating instructional events that will have an effect on student participation and learning. By studying the strategies of effective teachers and their effects on pupils' comprehension, we can gain access to the potential of the teacher as a model of reader-thinker as a step toward better teaching of reading comprehension.

U.S. - MEXICO FAMILY PROJECT

Abstract

Manuel Ramirez, III and Maurice Korman

Participating Schools: Martin Junior High, Fullmore Junior High, and Pearce Junior High.

Description of Study: Seventh grade Anglo and Mexican-American children and their parents are being compared to children and their parents in Monterrey, Mexico. The study focusses on family variables which are correlated with academic achievement.

Description of Results: None available as yet.

Implication of Results: Development of primary prevention programs to eliminate drop-outs. Parent education programs may also evolve from this work.

Implications for AISD: Teachers and school psychologists might be able to identify children who are potential drop-outs and encourage them and their parents to make changes in the family which could lessen their chances for leaving school.

Teachers and school psychologists might be able to identify children who are potential drop-outs and know how to encourage their families to make changes which could reduce their degree of alienation from the school and society in general.

A MICRO-ETHNOGRAPHIC STUDY OF A BILINGUAL KINDERGARTEN IN WHICH LITERATURE AND PUPPET PLAY ARE USED AS A METHOD OF ENHANCING LANGUAGE ACQUISITION

Interim Report

Pat Seawell

Participating School: Sanchez Elementary

Description of Study: The present study had two main purposes: (1) to create an activity in which young children could acquire language authentically, and (2) to identify and describe aspects of that activity which appeared to enhance their language acquisition.

Description of Tentative Results: Approximately 14 hours of audio and videotaped recordings of a class of 25 children, grouped in 7 triads and 2 dyads for a literature/puppet play activity, is now being analyzed. In order to describe the manner in which the literature/puppet play activity provided a basis for language acquisition, the data are being coded into three broad categories: literature-related language, language acquisition strategies, and emergent literacy patterns. Three tentative findings have emerged from an initial analysis of the data. These findings are: (1) during the literature/puppet play activity the language the children used was more diverse and often more complex than that generally found in adult-child or child-child interactions; (2) during the literature/puppet play activity the children used at least three different language acquisition strategies; and, (3) during the literature/puppet play activity many opportunities occurred in which the children engaged in emergent literacy behavior.

Implications of Tentative Results: Children's literature and related puppet play can provide young bilingual children with an engaging way to experience language growth in both their languages. Therefore, if the goal is to foster language growth among young bilingual children, a literature/puppet play activity might be one of the ways this goal could be achieved.

Implications for AISD: Since this is an interim report, the results are necessarily tentative. However, if the preliminary findings are further substantiated, it would appear that a literature/puppet play activity might be advantageous to young bilingual children in this school district.

FACTORS INFLUENCING CHILDREN'S CONCEPTS OF HEALTH AND ILLNESS

Abstract

Maria E. Defino

Participating Schools: Wooten Elementary

Description of Study: The purpose of this study was to determine whether or not factors such as health status (healthy/chronic illness) and/or locus of control of reinforcement (internal/external) moderate children's expressed conceptualizations of health and illness. Additional information about the measurement properties of a standard interview protocol was obtained, as well.

Description of Results: Insufficient raw data have been coded for analysis by the investigator to report results at this time. To date, more than half of the interviews have been transcribed; one-third have been coded. Reliability data for the coding are, however, quite good (after a single two-hour training session, the three coders obtained 100% interrater agreement on the criterion round of coding).

Implications of Results: None may be described at this time.

Implications for AISD: Because the investigation was conducted outside of the school, it is unlikely that participation will have had any influence on individual students or on the teaching-learning process in AISD.

84.52 **Social, Environmental, and Cognitive Predictors of Social and Psychological Adjustment in Adolescents** R85.11

Abstract

Walter E. Jordan-Davis

Participating Schools: None. This study will utilize data contained on the Office of Research and Evaluation research files (Youth Needs Survey File).

Description of Study: The objective of this proposed study is to construct a prediction model that aids in the understanding of adolescents' (junior and senior high school students) and the environmental and social factors which influence their social and psychological adjustment. This study will examine the relationship of adolescents with significant others (such as parents, peers, and teachers), along with demographic and family characteristics to determine the causal process of adjustment. Because the study is based on an existing data base, no student or teacher time is required.

Description of Results: Results of the study should support the following hypotheses: 1) adolescents respond to the environment on the basis of the cognitions or meanings that elements of the environment have for them as individuals; 2) societal/cultural meanings are modified through individual interpretation of the interaction between socio-demographic and home environment variables; and 3) the relationships among the stated variables will differ by socio-demographic background factors.

This study will use socio-demographic factors and home environment variables as independent variables. Self-reported and recorded data pertaining to social and psychological adjustment will comprise the set of dependent variables. The mediating variables will consist of cognitions pertaining to perceived social and environmental constraints. Path analysis techniques will be used to examine these relationships.

Implications of Results: The purpose of this proposed paper is to investigate the structure of adolescents' perception about themselves and others. A central concern of this investigation will be to provide a useful framework that can contribute directly to the understanding of the cognitive states and processes which mediate adolescents' social and psychological adjustment. The study will employ a social-ecological framework to explore the interaction of social, environmental, and cognitive structures concerning adolescents. The contributions of this study will include a clearer understanding of the cognitive processes mediating various types of school-related social experiences.

Implications for AISD: The results of this study should assist the District in working towards the primary prevention of the social and psychological problems confronting adolescents. This study will provide the District with a more complete understanding of students' interactions between a school's social-environmental setting and of students' individual cognitive adaptation to that environment. Such understanding could help the District in refining student assistance programs.

THE EFFECT OF IMPLEMENTING A MINIMUM COMPETENCY TESTING PROGRAM ON HIGH LEVEL MATHEMATICS SKILLS

Abstract

Evangelina Mangino

Participating Schools: None. Data to be used are STEP scores from ninth graders from 1976 to 1983.

Description of Study: Student responses to selected items of the mathematics sections of the STEP will be compiled to obtain two separate raw-score totals. One total will include only those items that assess skills that are also measured by the TABS test. The other total will include only those higher level mathematics skills items not assessed by TABS. These two types of scores will be obtained for all students who took the STEP between 1976 and 1983. Analysis of covariance using GPA as a covariate will be used to determine the difference in basic skills scores and high level skills scores for high, medium, and low achievers before and after the TABS was implemented.

Description of results: The purpose of this study is to determine the potential effects of the implementation of the Texas Assessment of Basic Skills (TABS) on mathematics skills of ninth-grade students in the Austin ISD.

Implications of Results: If the study indicates a significantly lower rate of high level skills acquisition and a significantly higher rate of basic skills acquisition after the TABS was introduced, one can reasonably conclude that the teachers may have narrowed their instructional focus to the detriment of higher level skills.

Implications for AISD: If the study confirms the detrimental effect of minimum competency testing on the acquisition of higher level skills, instructional coordinators and teachers will be advised of the trend and the need to balance curriculum and lesson plans to cover skills at all levels in order to meet the needs of average and high achievers, and to provide them with challenges.

ETHICAL ISSUES CONFRONTING NURSES EMPLOYED IN HOSPITALS, PUBLIC SCHOOLS, AND COMMUNITY HEALTH AGENCIES

Abstract

Marie B. Andrews, R.N., M.S.

Participating Schools: The population for this study includes all nurses employed in the Independent School Districts of Austin, Houston, Dallas, Fort Worth, and San Antonio; all nurses employed in the county and city health departments and the Visiting Nurse Associations of these five cities; and all nurses who are members of the Texas Nurses Association, Districts 3, 4, 5, 8, and 9, and who are employed in hospitals.

Description of Study: A Delphi respondent panel composed of eighteen nurses employed by hospitals, public schools, and community health agencies compiled a list of fifty-five ethical dilemmas. This list is being sent to the population identified above. Two scales have been attached to the list of dilemmas. The nurses will use the two scales to indicate the frequency with which they encounter the dilemmas in their nursing practice, and the importance which they attach to the dilemmas.

Implications of Results: At the present time the data are being collected, and no results are yet available. This study will provide a basis for the development of programs and courses to help nurses acquire skills in resolving ethical dilemmas by identifying those dilemmas most likely to be encountered in three specific areas of nursing practice. Specific course content may be planned to teach nurses problem-solving and ethical decision-making techniques, with emphasis upon those dilemmas which nurses can realistically expect to encounter.

Implications for AISD: This study is not directly related to student education. Indirectly, it could eventually benefit students as more school nurses become more aware of ethical dilemmas, and develop skills in dealing with those dilemmas.